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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,336	09/08/2003	Toshiaki Tsuda	Q77365	9220
23373	7590	10/06/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			RIELLEY, ELIZABETH A	
			ART UNIT	PAPER NUMBER
			2879	

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

ER

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/656,336	TSUDA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Elizabeth A. Rielley	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>9/8/03</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Drawings***

The drawings are objected to because in figure 2, the applicant has used a upper case “D” and refers in the specification to a lower case “d”, which may lead to some confusion. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a

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patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Uemura et al (US 20020158580)

In regard to claim 1, Uemura et al ('580) teach an arc tube for a discharge bulb (1; figures 9 and 10; paragraphs 70-74) in which both ends of a light emitting tube inserting electrodes (1a1; paragraph 40) respectively are sealed and a closed space having the electrodes opposed to each other (see figure 1) and filled with a light-emitting substance (not shown in figures; paragraphs 4, 9, 42, and 59) with a rare gas for starting is provided in the light emitting tube (paragraph 42), wherein the light-emitting tube comprises translucent ceramics (paragraph 41) formed substantially cylindrically (see figures 1, 9 and 10) and has a ratio  $d/L$  of an outside diameter  $d$  to a whole length  $L$  ranging from 0.2 to 0.5 (Uemura's outside diameter is OD in figure 9, paragraph 75 has  $OD = 6.5$  mm; whole length in  $L+p2+p2$  figure 10, paragraph 75 has  $L = 4.2$ mm and  $p2=7$ mm; so the Applicant's " $d/L$ " is Uemura  $6.5/18.2=0.4$ ).

In regard to claim 2, Uemura et al ('580) teach the light emitting tube has a thickness of 0.25mm to 1.2mm (paragraphs 53-56 and 62).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be

patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uemura et al (US 20020158580) in view of Uchiyama et al (EP 0859246).

In regard to claims 3 and 6, Uemura et al ('580) teach an arc tube for a discharge bulb (1; figures 9 and 10; paragraphs 70-74) in which both ends of a light emitting tube inserting electrodes (1a1; paragraph 40) respectively are sealed and a closed space having the electrodes opposed to each other (see figure 1) and filled with a light-emitting substance (not shown in figures; paragraphs 4, 9, 42, and 59) with a rare gas for starting is provided in the light emitting tube (paragraph 42), wherein the light-emitting tube comprises translucent ceramics (paragraph 41) formed substantially cylindrically (see figures 1, 9 and 10). Uemura et al ('580) are silent regarding the limitation that the light emitting tube has a parallel ray transmittance of 20% or less and a whole ray transmittance of 85% or more. Uchiyama et al (EP 0859246) teach a light emitting tube (paragraph 48) that has a parallel ray transmittance of 20% or less (see figure 6) and a whole ray transmittance of 85% or more (paragraphs 46) in order to improve the viewing angle of the device (paragraph 1). Hence, it would have been obvious at the time of the invention to one of ordinary skill in the art to modify the arc tube of Uemura et al ('580) with the transmittance of Uchiyama et al ('246). Motivation to combine would be to improve the viewing angle of the device.

In regard to claim 4, Uemura et al ('580) teach a light emitting tube that has a ratio  $d/L$  of an outside diameter  $d$  to a whole length  $L$  ranging from 0.2 to 0.5 (Uemura's outside diameter is OD in figure 9, paragraph 75 has OD = 6.5 mm; whole length in  $L+p2+p2$  figure 10, paragraph 75 has  $L= 4.2\text{mm}$  and  $p2=7\text{mm}$ ; so the Applicant's " $d/L$ " is Uemura  $6.5/18.2=0.4$ ).

In regard to claim 5, Uemura et al ('580) teach a light emitting tube that has a substantially

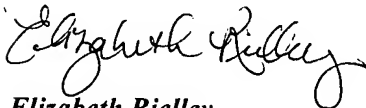
cylindrical shape (see figure 1).

*Conclusion*

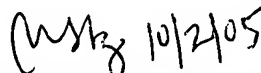
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth A. Rielley whose telephone number is 571-272-2117. The examiner can normally be reached on Monday - Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Elizabeth Rielley

Examiner  
Art Unit 2879

  
MARICELI SANTIAGO  
PRIMARY EXAMINER